

Title (en)

Method for controlling at least two robots having respective working spaces including at least one region in common

Title (de)

Verfahren zur Steuerung von mindestens zwei Robotern mit ihren jeweiligen Arbeitsplätzen einschließlich mindestens einem gemeinsamen Bereich

Title (fr)

Procédé de contrôle d'au moins deux robots ayant des espaces de travail comprenant au moins une zone en commun

Publication

EP 2586574 A1 20130501 (EN)

Application

EP 12160063 A 20120319

Priority

IT TO20110994 A 20111031

Abstract (en)

A method for controlling at least two robots (3, 4) having respective working spaces, including at least one region in common comprises the fact that the working space of each robot is modelled taking into account the objects present in the working space of the robot by defining one or more interference regions (IRs), each constituted by an elementary geometrical figure. The interference regions are classified in the following three different categories: prohibited interference regions (PIRs), defined as regions of space where the presence of the robot must without fail always be inhibited; monitored interference regions (MIRs), defined as regions of space where the presence of the robot is accepted, but controlled, the robot being pre-arranged for sending a signal to the central control unit (7) whenever it enters a monitored region and whenever it exits from a monitored region; and hybrid interference regions (HIRs), defined as regions of space that are able to change between a status of monitored region and a status of prohibited region as a function of an input signal to the robot sent by said central control unit. Each robot is pre-arranged for sending to the central control unit (7) a first output signal, serving as entry booking, whenever it is about to enter a hybrid region, and a second output signal, serving as entry/presence warning, whenever it enters a hybrid region. The status of each hybrid region is varied dynamically for each robot, during operation of the robots (3, 4), by sending, on the part of the central control unit (7), the input signal to the robot that renders the hybrid region prohibited or monitored for said robot.

IPC 8 full level

B25J 9/16 (2006.01)

CPC (source: EP KR US)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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BA ME

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